Trends in Development and Issues Related to IP Systems in Three GMS Countries: Cambodia, Lao PDR and Thailand

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Abstract

Some review was made on current trends in development and issues related to IP (intellectual property) system in three GMS (Greater Mekong Sub-region) countries, namely, Cambodia, Lao PDR and Thailand with due focus on aspects related to legal, administrative and organizational problems in carrying out the intellectual property policy in the countries.

At present, the IP enforcement infrastructure of the GMS countries, in general, need more to be desired, relative to other ASEAN member countries. While intellectual property laws, inclusive of patents, industrial design, trade marks, plant variety and copy rights have already been promulgated in the countries, and that various decrees have already been drafted or revised in order for implementing the law, their application cannot yet meet the expected standard, due to absence of necessary infrastructure and resources, including human resources.

Some theoretical explorations as well as recommendations were made, in latter part of the paper, concerning issues on relationship between the IP system and FDI inflows, along with perspectives on possible economic gains for both developed and developing countries.

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Keywords:

GMS (Greater Mekong Sub-region), IP (Intellectual Property), FDI (Foreign Direct Investment), TRIPS (Trade Aspects of Intellectual Property Rights), Economic Development

I. INTRODUCTION

Since WTO was established in January 1995, there seem have been more variations in IP protection regimes among the countries of Asia. Such variation should partly be attributed to the degree of efforts and availability of resources of the countries to pursue their own reform in national IP systems in order to meet standards of the Trade Aspects of Intellectual Property Rights (TRIPS) Agreement.

It is understood that the fundamental objective of the IP is to facilitate innovation through promoting R&D and popularize the R&D results (Nagaoka and Goto, 2003). It is also believed by many policy makers of the world that the strengthening the protection of the IP to be the best approach in attracting more inflow of FDI (foreign direct investment) to the country. The World Bank study by E. Mansfield (1994) for instance, has pointed out that the IPR protection system of a country has significant effect on the amount and kinds of technology transfer and FDI, particularly for relatively high-technology industry.

Although most member countries of the ASEAN, in recent years, have adopted IP policies, including modern IP laws, they still lack sufficient infrastructure for implementing such policies effectively. Among other ASEAN members, the countries of GMS (Greater Mekong Sub-region), i.e., Cambodia, Lao PDR, Myanmar, Thailand and Vietnam should require more investments in IP infrastructure and policy implementation capabilities, even compared to other ASEAN member countries. Before going into the country-specific trends and issues, some of the feature of IP system in these countries should be raised:

1. While Cambodia and Lao PDR still belong to the group of the LDC (Least Developed Countries), national IP Laws were already promulgated and that various decrees were already drafted or revised in these countries.
2. Cambodia became a member of WTO in 2004, but there is no obligation

for the TRIPS-compliant IP system until 2016 (because of the LDC status).

3. Although Lao PDR is not yet the member of WTO, she became party to the Paris Convention (for patents) in 1998 and the PCT (Patent Cooperation Treaty) in 2006.
4. Thailand became a member of WTO in 2005, and thus she is the party to the TRIPS Agreement. However, Thailand became party to the Paris Convention only in 2008 and the PCT (Patent Cooperation Treaty) in 2009.

In this paper, we explore some of the current trends in development and issues related to intellectual property systems in three GMS countries with emphasis on aspects related to legal, administrative and organizational issues in carrying out the intellectual property policy in the countries. However, since the main objective of the paper is to look into certain aspects of relationship between IP systems and possible economic gains for the countries, and therefore, it will not elaborate on comprehensive review on all details of IP policies and programs in the countries. Moreover, feature and issues of the countries will be presented in a chronological order by which collection of data were undertaken, namely, Thailand, Lao PDR and Cambodia, with due focus on Thai IP feature and issues first, followed by two other GMS countries.

II. Collection of Data

The collection of data has been carried out since 2008 to 2011, mainly under the Japan Foundation-sponsored research project of "International Cooperative Research for Overcoming ASEAN Divide and the Development of Greater Mekong Sub-region" being managed by the Ritsumeikan University, in cooperation with Kinki University, Nagoya University, Nagasaki University and the Doshisha Women's College. Interviews and collection of materials were done through the concerned IP offices of the governments, lawyers, consultants, researchers of three countries. Special thanks should be extended, in this connection, to Mr. Michitaka Ohata, Director, Intellectual Property Department, JETRO Bangkok Center, Mr. Masafumi Iguchi, President, S&I International Bangkok Office, and Prof. Phin Sovath, Assistant Dean and Professor, Faculty of Law and Public Affairs, Panasastra University, Phnom Penh, for kindly providing me with

very useful information, data and suggestions.

III. FEATURE AND ISSUES BY COUNTRIES

1. Thailand

As mentioned, Thailand became party to the Paris Convention for patents in 2008 and PCT (Patent Cooperation Treaty) only in 2009. Since Thailand became a member of WTO in 2005, current Patent Act, being promulgated in 1979 actually went through revisions in 1992 and 1999, and is thus compliant to the TRIPS Agreement. The Patent Act covers invention patents, petty patents (or "utility models") and industrial designs.

Thailand has been a member of WIPO (World Intellectual Property Organization) since 1989, and that Thailand's party to the Berne Convention on copyrights dates back as long as to 1931.Thailand's Trademark Act, and that the Layout-design of Integrated Circuit Act and Protection of Plant Varieties Act were enacted in 2000 (Iguchi, 2002). Moreover, the Trade Secret Act and the Manufacture of Optical Discs Act were enacted in 2002 and 2005, respectively. Although Thailand still is not a party to the Madrid Protocol for Trademarks, the Trademark Act of Thailand has already been compliant to the TRIPS Agreement, following major revisions made in years 2000 and 2003.

The Department of Intellectual Property (DIP) was established under the Ministry of Commerce in 1992 to cover wide range of responsibilities in IP, ranging from reforms in IP legal system, information technology development in connection with IP administration, domestic and international protection of Thai IP, to the enforcement of various IP laws.

The DIP, however, is not an autonomous organization, with no authority of/ and to make use of all its earnings as annual budget for its own activities. It is noteworthy that the budget which DIP acquired in 2006, for instance, was approximately 158 million baht, while the revenue which DIP made in the same year (mainly through registration fees) was nearly 338 million baht. Table1 and figure 1 show the relationship between the annual budget and the revenue of DIP from 2003 to 2006. The table and the figure actually suggest that the annual revenue of DIP exceeds more than double or even more than that its own budget.

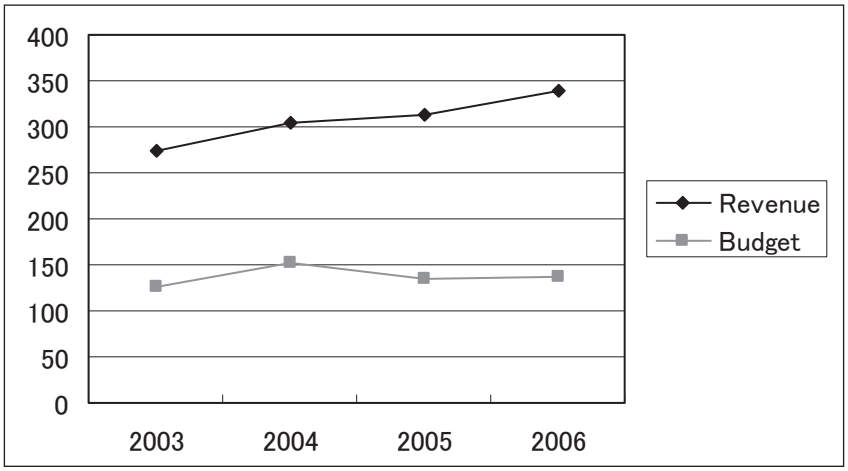
Table 1. Revenue and budget of DIP (2003-2006)

Year	2003	2004	2005	2006
Revenue	274.35	303.56	313.56	338.32
Budget	125.01	151.59	134.55	137.79

(Unit : Million Baht)

Source : Department of Intellectual Property, Ministry of Commerce, Annual Report 2007

Figure 1. Revenue and budget of DIP for 2003-2006



Source: Department of Intellectual Property, Ministry of Commerce, Annual Report 2007

Table 2 shows the number of staff members employed by the DIP, i.e., total number of staff members, consisting of administrators, patent examiners, trademark examiners, legal officers, auxiliary staff members (who were the Thai government civil servants) from the year 2001 to 2007. Number of patent examiners increased from 24 in 2001 to 29 in 2003, but there has been no increase for four years from 2003 to 2007.

Table 2. Number of staff members of DIP : Administrative staff, Patent examiners, Trademark examiners, Legal officers, who were the civil servants of the Government Thailand 2001-2007

Year	2001	2002	2003	2004	2005	2006	2007
Admin. Staff	13	13	13	15	15	15	15
Patent examiners	24	24	29	29	29	29	29
Trademark examiner	21	21	30	30	30	30	30
Legal officers	18	18	26	26	26	26	26
Auxiliary staff	83	82	114	112	111	111	110
Total	159	158	200	200	199	199	198

Source : Department of Intellectual Property, Ministry of Commerce, Annual Report 2007

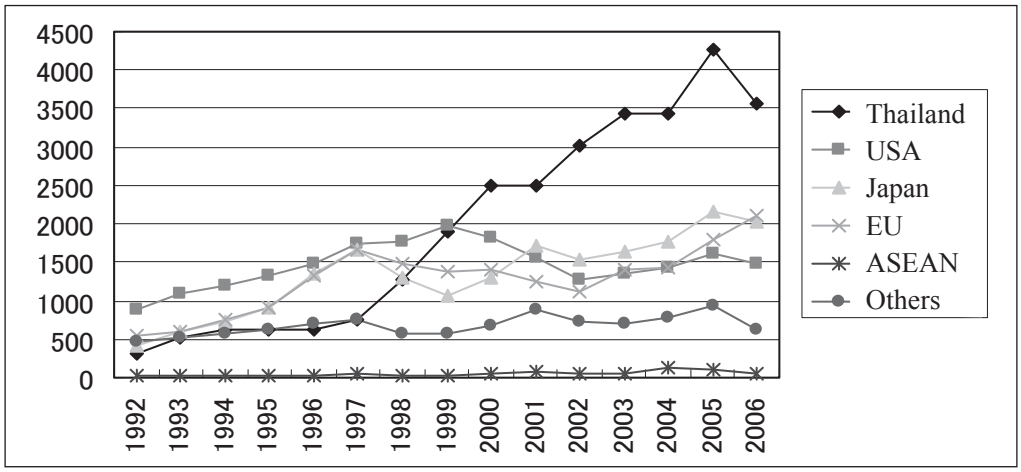
Table 3 and the figure 3 show the number of patent application by the countries for the period of the last 15 years from 1992 to 2006. (The figures also included number of design applications.)

Table 3. Number of patent applications by countries for1992-2006

Year	Number of patent applications by countries						Total
	Thailand	USA	Japan	EU	ASEAN	Others	
1992	308	895	418	536	16	460	2633
1993	525	1097	586	601	22	514	3345
1994	634	1207	736	762	25	564	3928
1995	631	1332	917	898	29	629	4436
1996	622	1482	1362	1315	37	700	5518
1997	764	1735	1669	1666	45	744	6623
1998	1266	1766	1295	1472	33	577	6409
1999	1886	1970	1061	1371	33	576	6897
2000	2500	1817	1294	1394	57	684	7746
2001	2504	1567	1711	1241	78	893	7994
2002	3030	1266	1533	1116	61	720	7726
2003	3426	1359	1631	1401	63	694	8574
2004	3428	1429	1762	1419	124	780	8942
2005	4258	1625	2150	1789	117	946	10885
2006	3564	1473	2019	2107	46	612	9821
Total	29346	22020	20144	19088	786	10093	101477

Source: S&I International Bangkok Office Statistics of Thai IPR and Department of Intellectual Property, Ministry of Commerce, Annual Report 2007

Figure 2. Number of patent applications by countries 1992-2006



Source: Compiled from S&I International Bangkok Office Statistics of Thai IPR and Department of Intellectual Property, and the Ministry of Commerce, Annual Report2007

While looking at the said revenue-budget relationship of DIP (as shown in table 1 and figure 1), as well as increasing amount of work of DIP which can be observed in the increasing trend of patent applications, as shown in table 3 and figure 3, one may wish to suggest that more amount of revenue earned by DIP may be recurred, in order to strengthen its own human and other resources, *inter alia* increased number of patent and other examiners, and further development in IT infrastructure.

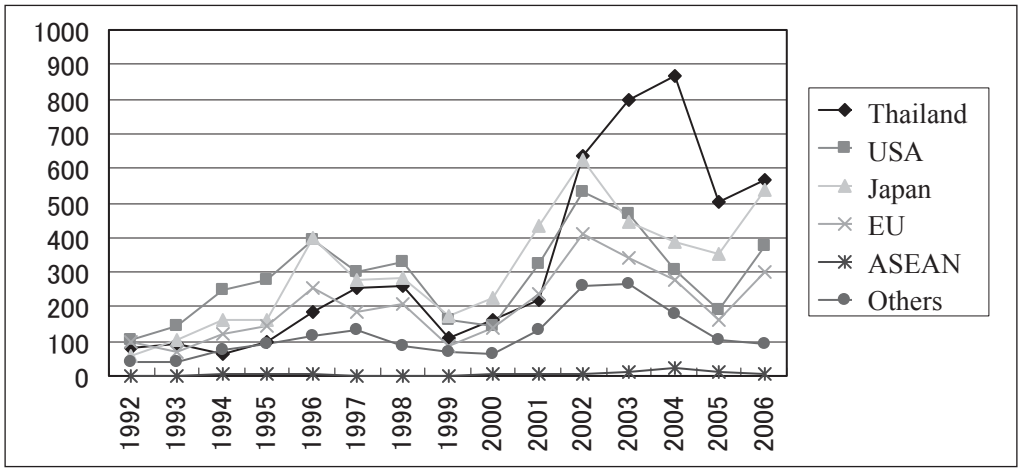
The Table 4 and the figure 4 show the trends in registered or approved number of patents, applied by corporations of Thailand and other countries (the figures also include number of registered design).

Table 4. Number of registered patents by countries 1992-2006

Year	Number of patent registration by countries						Total
	Thailand	USA	Japan	EU	AEAN	Others	
1992	83	104	59	100	0	40	386
1993	92	146	105	67	1	40	451
1994	62	246	160	122	6	78	674
1995	101	275	164	144	3	95	782
1996	186	393	398	254	6	118	1355
1997	252	299	278	185	0	135	1149
1998	261	330	286	210	0	88	1175
1999	110	161	175	84	1	67	598
2000	164	145	227	137	5	66	744
2001	218	321	431	239	3	134	1346
2002	635	532	623	409	7	260	2466
2003	797	467	444	342	11	265	2326
2004	867	307	390	275	25	180	2044
2005	505	191	352	159	10	105	1322
2006	568	375	536	299	8	92	1878
Total	4901	4292	4628	3026	86	1763	18696

Source: Compiled from S&I International Bangkok Office Statistics of Thai IPR and Department of Intellectual Property, and the Ministry of Commerce, Annual Report2007

Figure 3. Trend in number of registered patents, 1992-2006



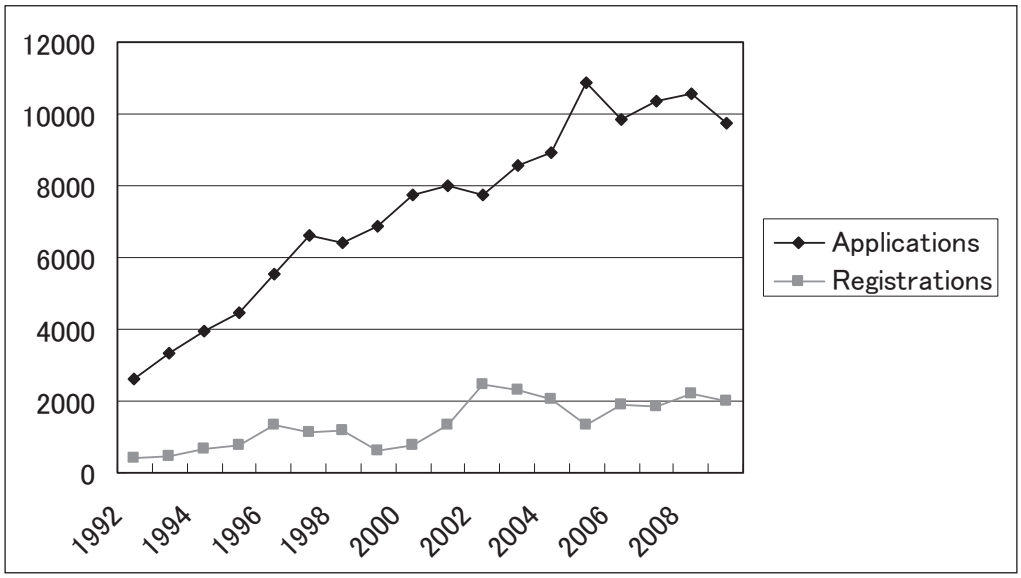
Source: Compiled from S&I International Bangkok Office Statistics of Thai IPR and Department of Intellectual Property, and the Ministry of Commerce, Annual Report2007

While looking at table 3 and figure 3, it should be noted that during the 1990s, more than 85 per cent of the patent applications were done by foreign corporations and only less than 15 per cent of applications were done by the Thai (domestic) corporations. After the year 2000, however, there is a marked trend of increase in application by Thai corporations, with the portion of Thai applications in the year 2006 being 36.3 per cent of the total, and that in the year 2005, it was 39.1 per cent. The ratio of domestic vs foreign applications, in fact, can be compared with that of other ASEAN member countries and China: Most of the ASEAN countries scored only less than 10 per cent of total patent applications being done by their own domestic corporations, while China scored more than 50 per cent of applications done by the domestic Chinese corporations (Motohashi, 2005). For the case of application of petty patents (or "utility models") in Thailand, majority of applications (nearly 95 per cent) were done by the domestic Thai corporations (S&I International 2005).

It should also be noted, while observing the table 3 and table 4, that total number of patent applications in the year 2006, for instance, was 9,821 and that the total number of registered or approved patents in the same year was only 1,878, or approximately 19 per cent of the total applications. Total number of patent examiners of the DIP in the year 2006 was only 29. It is not as simple to say that 29 patent examiners will be dealing

with 9,821 patent applications of that year: Through hearing with a few lawyers, consultants dealing with IP matters in Thailand, it would usually take at least four to five years for the applied patents to be approved for registration. Figure 4 shows the relationship between total number of application and registration of patents by years. The large gap between the total number of patent application and patent registration, actually suggests that there is a huge backlog in the examination/registration of patents.

Figure 4. Trends in numbers of applications and registration of patents, 1992-2008



Source: Compiled from S&I International Bangkok Office Statistics of Thai IPR and Department of Intellectual Property, and the Ministry of Commerce, Annual Report2009

The reality of the huge backlog in examination/registration of patents, in fact, might be attributed to the insufficiency of resources, including financial, human resource and the set up in IT infrastructure. As mentioned, total number of patent examiners of DIP as of 2006, was only 29. However, it is not just the mere number of patent examiners that should be considered an issue: In order to be a qualified patent examiner, he/she would actually have to go through a lengthy period of education in natural science and/or engineering as well as sufficient practical trainings, including on-the-job trainings, in order to able to perform duties, particularly to

compare and make distinctions between prior art technologies with that of new or inventive technologies. Moreover, availability of sufficient IT infrastructure and the ability in skilful use of information technology will also be essential in order for them to be able to carry out duties satisfactorily. Due emphasis, therefore should be made, on the importance in human resource development and IT infrastructure development in IP, or it may lead to further backlog in patent examinations. The huge backlog, in fact, should increase possibilities of more IP litigation cases, which eventually should weaken the IP enforcement capability of the whole country.

2. Lao PDR

Lao PDR belongs to the category of the LDC (Least Developed Country) in the Greater Mekong Sub-region (GMS), although its average GDP during the period from 2004 to 2008 has shown over seven per cent growth per annum and that the FDI inflow has been increasing significantly in recent years.

Lao PDR became a member of the WIPO (World Intellectual Organization) in 1995, and thus WIPO's support has been extended continuously to the country in developing IP legal system and policy implementation. Lao PDR is not yet the member of the Madrid Protocol for Trademarks and Berne Convention for Copyrights. Lao PDR also is not yet the member of the WTO, however, efforts are being made to set up IP legal frameworks to meet requirements of the TRIPS Agreement. Lao PDR, on the other hand, became party to Paris Convention in 1998, and the PCT (Patent Cooperation Treaty) in 2006 (United Nations ESCAP, 2008).

Although IP policy and programs of Lao PDR, in realty, are still underdeveloped compared to other ASEAN member countries, the government of Lao PDR expressed its view on the importance of IP in economic and social development of the country, and that IP to be an important vehicle for facilitating R&D, technology transfer and promotion of trade and investment. (National Assembly of Lao PDR, 2008).

The IP Law was promulgated in 2008, to cover comprehensive range of protections in invention patents, petty patents (or "utility models") industrial design, trademarks, copyrights, plant variety, trade secret, geographic indications and integrated circuits. In drafting the IP Law, reference was made with the WIPO's "Model IP Law" for developing countries, and the IP Laws of neighbor countries, such as those of Thailand and Viet-

nam. Among other IP legal framework, the Prime Minister's Decree on Patents, Petty Patents and Industrial Design was issued in 2002, and the Decree on Trademarks was issued in 1995.

The Prime Minister's Decree on Patents, Petty Patents and Industrial Design issued in 2002 states that it will provide protection that will meet necessary standards in novelty, non-obviousness and industrial applicability. The applications in patents and petty patents have to be done in Lao, however, when an application was done by foreigners, translation into Lao should be submitted within 90 days, following the initial filing of application in the original (foreign) language. For the case of industrial design, applications can be done both in Lao and English.

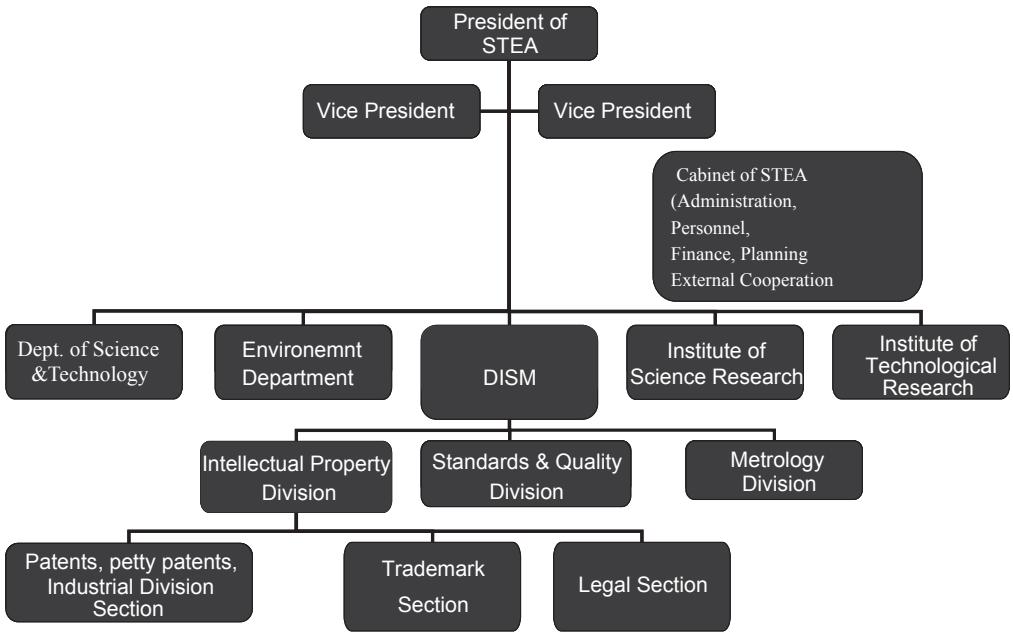
The Intellectual Property Division of the Department of Intellectual Property, Standardization and Metrology (DISM) under the Science, Technology and Environment Agency (STEA), established in 1990, has been responsible for accepting applications and examination/registration of patents, petty patents, industrial design and trademarks. However, due to lack of technical infrastructure in carrying out substantive examinations, there has been no registration done thus far for patents. It was noted through the interview, that cumulative number of applications thus far in petty patents and industrial design being combined was about 60, and for invention patents, it was only three, as of 2009.

Due to the overall national standard of technological capability, as well as lack of technical infrastructure, major IP activities of Lao PDR, therefore, have to relate mainly on trademarks. Approximately 10,000 cumulative applications of trademarks thus far have been filed as of 2009, with approximately 1,000 trademark applications have been done per annum. It is said that about 95 per cent of trademark applications actually have been done by foreigners.

The Department of Intellectual Property, Standardization and Metrology (DISM), being established under the Science, Technology and Environment Agency (STEA), has been in charge of wide range of responsibilities in IP, however, as for the resource of DISM, total number of staff members working in the DISM, for instance, was less than 50 as of 2009, including temporary staff members.The Department was supported by very little modern IT infrastructure. In order for further developing the IP system of the country, including legal and administrative capabilities, efforts in campaign/mass education concerning the important role which IP has on na-

tional economic and social development (at least in the long run) to the politicians, senior government officials, public and private sectors and general public are also considered an important aspect of the role of the DISM. An organization chart of the DISM is given:

Figure 5. Organization Structure of DISM (Department of Intellectual Property, Standardization and Metrology)



Source: Department of Intellectual Property, Standardization and Metrology (August 2011) <http: www.stea.la.wipo.net/aboutdism/index.html>

In view that Lao PDR, being surrounded by countries with economic dynamism, such as China, Vietnam and Thailand, trade and investment activities with Lao PDR in coming years is expected to increase rapidly. As the trade and investment activities with Lao PDR increase, cases of IP related disputes in the country would also likely to increase. For trade and investment related IP infringement cases, a special taskforce has been set up, comprising of Science, Technology and Environment Agency (STEA), under which the DISM operates, and the Economic Police, Prosecutor's Office and the Courts. The Economic Arbitration Office was also set up, within the Ministry of Justice, as a mechanism for mediation prior to litigations at the court.

In cases of IP infringement, the IPR holders will have alternatives between "administrative" route and "legal" route for resolving the cases (Hakoda, Southay, 2001). In cases of "administrative" route, the IPR holders would have to inform DISM in writing, and that the DISM will review cases together with other institutions that are relevant. For the cases of "legal" route, IPR holders can bring the case either to the Economic Arbitration Office or bring it directly to the courts for legal processing. In reality, however, the IP disputes in Lao PDR, thus far, have been settled mostly through arbitration or mediation, rather than litigation at the court, mainly because of lack of legal infrastructure of the country. Cumulative number of litigation cases was said to be only a little over 40, when the fact-finding interview was undertaken in 2009.

The rareness of litigation cases in Lao PDR, therefore, does not imply that there is few IP infringement cases in the country. Actually, many IP infringing products, including home electric appliances, watches, mobile phones, CDs, handbags, etc., are rampant in markets, and some of the well elaborate pirate products are often difficult to tell the difference with that of the genuine products. Although it is difficult to produce clear evidence, there are foreign criticisms that Thai IP infringers in recent years, are moving operations across the border into Lao PDR, because of increasing prosecution and crackdown in Thailand. There are also claims that some of the infringing machine parts such as those of automobiles and motorbikes parts that are produced in (technologically more developed) China are brought into Lao PDR with no marks, but they are given marks and packages and sold in the domestic Laotian market and/or "exported" further to third countries. In view of the reality of the abundant infringing products, it may be the time for the government to consider introducing criminal law mechanism, along with the IP legal reforms being carried out to meet requirements of the TRIPS Agreement.

3. Cambodia

Cambodia is another country in the GMS which belongs to the category of the LDC with agriculture absorbs over 70 per cent of her population, and that manufacturing sector, thus far, consists mainly of labor intensive industries. The net inflow of foreign direct investment to Cambodia, however, has been increasing significantly in recent years, and that GDP growth during the past four-year period from 2004 to 2007, for instance,

has shown over 10 per cent average per annum.

Cambodia became a member of the WIPO (World Intellectual Organization) in 1995. However, she is not yet the member of the Madrid Protocol for Trademarks and Berne Convention for Copyrights as of 2010. Cambodia, however, became a member of the Paris Convention for patents in 1998, and preparations are now underway to become a member of the PCT (Patent Cooperation Treaty) (United Nations ESCAP, 2008). Cambodia became a member of WTO in 2004, however because of the LDC status, she is exempted from obligations of TRIPS-compliant IP until 2016. Nevertheless, efforts are currently underway by various government sectors not only to develop further on IP legal framework, but also to meet standards of IP enforcement required in the TRIPS Agreement.

Cambodian government has promulgated the Law on Patents, Utility Model Certificates and Industrial Design, and the Law Concerning Marks, Trade Names and Act of Unfair Competition in 2002, and that the Law on Copyright and Related Rights was promulgated in 2003. It is said that the IP laws of Cambodia were drafted in reference to the WIPO's "Model IP Law" for developing countries, together with IP laws of some countries, such as France, Japan, Thailand and Vietnam.

IP related activities of the government, i.e., IP related policy-making, administration and enforcement, thus far have been spread among different ministries: (1) The Ministry of Commerce being responsible for trademarks related activities; and (2) Activities related to patents, utility models and industrial designs are under the responsibility of the Ministry of Industry, Mine and Energy; and (3) the Ministry of Culture and Fine Arts being responsible for copyrights related activities. Since the IP related responsibilities are separated among different ministries, a special committee was set up to coordinate all IP related activities among the ministries. The special committee is composed of the Minister of Commerce as Chairman, Minister of Industry, Mine and Energy as Deputy Chairman, and Minister of Culture and Fine Arts, Minister of Telecommunication and Minister of Information as members.

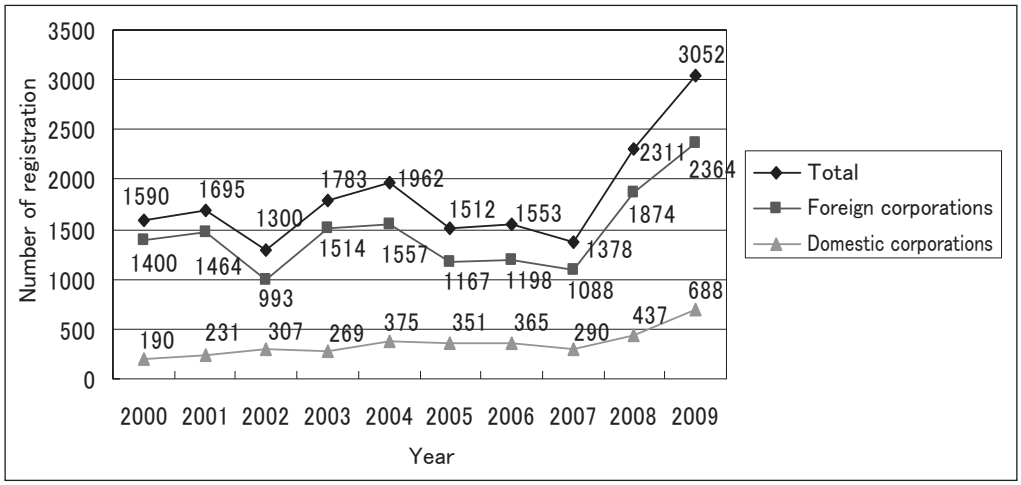
When tasks are dispersed among different agencies or ministries, the degree of coordination and integration mechanism of the committee, actually will be the key element for success in achieving objectives. However, in spite of increasing efforts, coordination of IP related activities among the ministries thus far, seem to pose many difficulties.

As mentioned earlier, neighbor countries such as Thailand, for instance, carry out tasks related to IP mainly at only one agency, i.e., DIP (Department of Intellectual Property) under the Ministry of Commerce, and for the case of Lao PDR, they are carried out at the DISM (Department of Intellectual Property, Standardization and Metrology) of the Science, Technology and Environment Agency. In terms of management and administration, it is considered much simpler and efficient, when duties and authority are maintained in a single agency. In order for carrying out more effective and efficient IP policy and programs, a review should be made on the organization and authority structure of the government that are in charge of IP activities.

Among other legal framework, the Law on Patens, Utility Model Certificates and Industrial Design, which is more related to the development of technological and industrial capability of the country has been currently under the responsibility of Ministry of Industry, Mines and Energy. As of September 2009, there were 95 applications of patents (all of which actually have been done by foreign corporations), but they have not been registered thus far, since the patent examination procedure has not been set up yet.

As mentioned earlier, Cambodia is not yet a party to Madrid Protocol for Trademarks, but the main IP activities of Cambodia, thus far, relate to trademarks, just like the neighbor Lao PDR. Cumulative number of trademarks registration, as of 2009 was approximately 18,000, with 1,000 to 3,000 registrations have been done per annum. As indicated in figure 6, most of the trademark registrations have been done by foreign corporations, however, there is an increasing trend of registrations by Cambodian (domestic) corporations, and by the year 2009, 23 per cent of the total trademark registrations were done by Cambodian (domestic) corporations: When the trademark application/registration began in 2000, 88 per cent of the trademark registrations were of foreign corporations, and only about 12 per cent was the portion of Cambodian (domestic) corporations. Duration of the period from trademark application to registration is said to be only about two to three months, which is relatively shorter, even compared to some of the industrially developed countries.

Figure 6. Number of trademark registrations in Cambodia 2000-2009



Source: Var Roth San, Director, Department of Intellectual Property Rights, Ministry of Commerce (2010) "Implementation of Marks, Trade Names and Acts of Unfair Competition Law", Presented at the Meeting of Head of Secretariat of National Committee for Intellectual Property Rights.

There were about 70 staff members in the DIP of the Ministry of Commerce, as of 2010. The level of staff emoluments of DIP, even for the trademark examiners, was the same as those of other civil servants of Cambodia. Along with scarce resource in modern IT infrastructure, one of the challenging issues of the office, actually, lies in recruiting and maintaining of the qualified human resource, since the well educated and technically competent staff members, are opt to seek jobs at private sectors, where in many cases, could offer better emoluments to the competent individuals.

Just like the neighbor Lao PDR, the IPR holders will have alternatives between "administrative" route and "legal" route for resolving the cases in cases of IP infringement. In reality, however, the IP related disputes in Cambodia, thus far, have also been settled, in most cases, through mediation by the DIP of the Ministry of Commerce. A few hundred cases of IP related disputes were settled through mediation at the DIP per annum, and that cumulative litigation cases were said to be only less than 20, when the fact-finding interviews were undertaken in 2010.

IV. Observations and discussions

Since stages of economic development of Thailand and that of Lao PDR and Cambodia are different, and each country has its own historical and cultural backgrounds, and therefore, feature and issues related to IP system of each country can be different. Nevertheless, there are certain common denominators among other feature and issues: All three countries, actually have comprehensive IP laws already, inclusive of patents, industrial design, trade marks, plant variety and copy rights, etc., and that various decrees have already been either drafted or revised in order for implementing the law. Three countries are also party to various international treaties/obligations related to IP, and that the government offices in charge of administration and implementation of national IP policies and programs have already been established. Moreover, the governments express their own statements concerning the important role which IP has on national economic development at various international fora, with due emphasis on needs to promote trade and investment. In this regard, various efforts have been currently undertaken to carry out legal reforms and to strengthen IP implementation capabilities to meet requirements of the TRIPS Agreement of WTO.

However, major issues actually remain in their standard of enforcement capabilities in IP, perhaps in different degrees, mainly due to the insufficiency in necessary infrastructure and resources. Problems related to insufficiency in infrastructure and resources include range of issues such as human resource to modern IT facilities, coordination mechanism among sectors of government, to certain "soft" know-how in administration/management of IP policies and programs. In reality, infringing or counterfeit products are still rampant in markets of Lao PDR and Cambodia, and that real administration of patents, for instance, is yet not possible in the countries. The "backlog" issue of patent examination/registration in Thailand, in fact, can also be attributed mainly to the issue on insufficiency in infrastructure and resources, such as non-availability of sufficient manpower of examiners and shortage of modern IT infrastructure.

One of the contentious issues that should be raised here in this connection is that the policy makers of three countries as well as many other developing countries in the world today seem to believe that strengthening IP protection regime of the country to be the best means for promoting

trade and attracting more inflow of FDI.

As mentioned earlier, the World Bank study by E. Mansfield (1994) for instance, has pointed out that the IP protection system of a country has significant effect on the amount and kinds of technology transfer and FDI, particularly for relatively high-technology industry. What the study suggests, in fact, is that the MNCs will not invest to the countries with weaker IP protection, or even if they invest to such countries, they will not bring in or transfer technologies that are most recent or pioneering.

Another study by Lederman and Maloney at the World Bank (Lederman and Maloney 2003) points out that one of the reasons why more R&D activities have been done in developed world is because of their strength in IP protection. They also suggest that when the developing countries strengthen IP protection, there should be more transfer of technology, mainly because of more opportunity in FDI inflows, and that eventually should enhance productivity of the developing countries themselves.

However, some of the empirical findings in recent years raise a few questions on the notion of direct relationship between the strength of IP protection of the countries and inflow of FDI. Masks and Finks (2005) emphasize from a few empirical study findings since toward the later 1990s, that although the strength of IP protection of a country can be an important variable of FDI location for the MNCs, it is only one of the many important variables (of location advantages) for the MNCs to make decision in selecting host countries. What Masks and Finks suggest is that if the developing countries wish to attract more inflow of FDI, it is wiser to improve their overall investment climate and business infrastructure rather than to strengthen the IP protection sharply: It is also suggested that when the IP protection of a country is very strong, there will be more options for the MNCs, in terms of market entry strategies, i.e., export, licensing and FDI, and therefore, the strengthening of IP protection does not always lead to more incentives for FDI.

Moreover, rise and fall of inflow of FDI, as observed over years, often tend be more volatile by short-term factors such as currency exchange rates and business cycles (Masks 1997, 2005). In carrying out the present study, some quantitative analysis was actually tried initially, to look into the correlations among various IP related variables (such as the timings which countries acquired membership of various international IP treaties and conventions, including the Paris Convention, PCT and WTO's TRIPS

Agreement, and timings which major revisions or reforms were made in domestic/national IP legal frameworks, such as promulgation of IP laws in the countries) to be crossed-examined with the statistical data on inflow of FDI to the countries. No significant causal relations or correlations, however, were identified in relation to such variables with that of FDI inflow to the countries.

Masks (2005) suggests further, that the strength of IP protection should be the more relevant variable for the MNCs when countries are: (1) middle income level or higher; and (2) with higher technological absorbing/learning capability. Level of per capita income of the country should relate to market size and that higher technology absorbing/learning capability should relate to technology "imitation" capability, although further evidence from empirical and theoretical research works in this regard are desired, particularly with a view to complex variables among the strength of IP protection, technological capability and some other location advantages of the host countries, as well as options in marketing strategy (i.e., FDI, licensing and export) of the MNCs. The need of clearer understandings of such factors, possibly through empirical research evidence, actually means that there is more room to be considered before policymakers of developing world can come up with most suitable IP policy directions that will truly be beneficial - both in shorter and longer terms - for their own national economic development. Need of further empirical research, therefore, should be called upon in this regard.

Another point made by Finger and Schuler (2000) was, that in order for the developing world governments to strengthen or reform their own IP system, they would actually have to look into the "opportunity costs" for employing their possibly scarce fiscal and human capital in the administration and enforcement. Such a reality in developing countries, in fact, have been felt, either explicitly or implicitly, by quite a few government officials engaged in IP policy and program implementation. Such a real world issue, at the same time, should explain reasons why IP system reform and enforcement are not always considered the high priority matter among the higher-level policy makers in some of the developing countries.

It was noted, however, through fact-finding interviews in the countries, that one of the important roles of the officials in charge of IP policy and programs were to provide campaigns on and a kind of mass education concerning the important role which IP has on national economic develop-

ment (at least in the long run) to various stakeholders, such as politicians, senior government officials, as well as business sectors and general public.

Since some of the aforementioned recent empirical study findings pause quite a few questions concerning the notion of direct relationship between the strength of IP protection and FDI inflows, as well as some of other issues that are yet to be clarified on the IP protection and economic development, it is hard, at least at this stage, to conclude that the "pro-patent" or so to say, "pro-IPR" logics that are asserted by many of the industrially advanced countries today cannot be accepted universally be beneficial to all countries in the world, both in long term and/or short term perspectives. On the other hand, since most of the ASEAN member, and the GMS countries in particular, cannot join "anti-patent" or "anti-IPR" calls often made by some such countries like India and Brazil, somewhat a "middle-way" and due gradualism or "step-by-step" approach in IP reforms should be suggested in accordance with their own process in economic development.

Such an approach of "middle-way" and gradualism or "step-by-step" approach, actually might be seen in the case of Thailand, who became a member of the WTO in 2005, but she became party to the Paris Convention only in 2008 and the PCT (Patent Cooperation Treaty) in 2009: Thai status in becoming a member of such international IP treaties can be compared with that of the neighbor LDCs of GMS, i.e., Cambodia and Lao PDR: Cambodia became a member of the Paris Convention in 1998, and for the case of Lao PDR, she became party to the Paris Convention in 1998 and the PCT in 2006.

It was noted through the fact-finding interviews in Thailand, that there were certain "skepticism" among various stakeholders within the country concerning the real role/interest of IP on the national economic developmentt for years, partly because of the fact that the international trends in strengthening IP protection have been mainly pursued and lead through by industrially more advanced countries. However, all along with significant economic development in recent years, Thailand has been following steps in reforming it own IP policies and programs gradually, perhaps with due caution: The DIP of the Ministry of Commerce, for instance, reports on their annual report and over the internet concerning number of confiscation and arrest cases in trademark, copyright and patent infringing products, and that such infringing or counterfeit products have been

reduced from the market places largely in recent years, compared at least a decade ago. There is also a trend, that the rates in applications of petty patents and industrial design have been done mostly (nearly 95 per cent) by the domestic Thai corporations. While petty patents and industrial design, by their own nature, do not require the highest or pioneering technological capabilities, such a trend actually should be considered a symbolic sign of the rise of interest and certain acknowledgement of IP by the general public of Thailand.

Cambodia and Lao PDR do not have long histories in IP. However, they could take advantage of IP experiences not only from industrially developed countries and international organizations but also from the neighboring countries such as Thailand, China and Vietnam, through the scheme of TCDC/ECDC (Technical Cooperation among Developing Countries/Economic Cooperation among Developing Countries), and that the reforms could be carried out with due gradualism in accordance with their own process of economic development.

Industrially more developed countries and regions in the world, such as USA, Japan and EU should renew perspectives that enhancing assistance in IP to the developing world, and the GMS countries in particular, in areas such as human resource and IT infrastructure and transfer of somehow "softer" policy administration and enforcement capabilities, eventually should bring in a great deal of national interest for their own, in the long run.

V. Conclusive remarks and recommendations

In reviewing the IP systems in three GMS countries, i.e., Thailand, Lao PDR and Cambodia, following conclusive remarks and possible recommendations were made:

1. In spite of difference in feature and issues, the three countries have comprehensive IP laws already, and that various decrees have also been either drafted or revised in order for implementing the law. However, major issues still remain in the standards of enforcement capabilities in IP, mainly due to the insufficiency in necessary infrastructure and resources. While the problems related to insufficiency in infrastructure and resources include wide range of issues, such as availability in human resource, modern IT facilities and coordination mechanism among

sectors of government, etc., somewhat a higher level political commitment should be desired for the countries in order to implement policies and programs more effectively;

2. Quite a few recent empirical research findings pose questions concerning direct relationship between the strength of IP protection and FDI inflow and national economic development. It should be noted that the "pro-IPR" policy suggested by industrially advanced countries may not always provide economic benefit to all countries in the world at all times universally. Moreover, no sufficient understandings are provided, thus far, for the policy makers of developing world to come up with the most suitable national IP policies: Pursuits are therefore desired in carrying out further studies, *inter alia* on the relationship among variables of IP protection, FDI, technology transfer and development, and longer and shorter term economic benefit for the countries;
3. While further understandings, based on empirical research findings are desired on the true relationships among variables of IP protection and various aspects in national economic development, somewhat a "middle way" and due gradualizm or "step by step" approach in IP should be called for in many developing countries, including the GMS countries: It should be more desirable for the countries to reform and strengthen their own IP policies in accordance with their own stage of technological capability and economic development.
4. The scheme of TCDC/ECDC (Technical Cooperation among Developing Countries/Economic Cooperation among Developing Countries), should be facilitated in the IP among the countries of Asia, so that the countries can learn from experiences of others that have similar problems in policy and program implementation; and
5. Industrially more advanced countries and regions, such as USA, Japan and EU should consider enhancing further technical assistance to developing countries, including GMS countries, for their endeavor in national IP policy reform and development, with particular reference to the areas such as development in human resource, IT infrastructure and policy administration and enforcement capabilities.

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